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Special Points of Interest

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- Hand washing
- Work Orders

Environmental Health Food Service Sanitation

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IPM for the Food Service Industry

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Food, shelter and water are what we all need to survive. Integrated Pest Management (IPM) strives for "built in" control solutions based on these three resources. IPM is more about prevention than control. Preventative maintenance seeks to identify and eliminate potential pest access, shelter and nourishment.

Pests such as insects and rodents are a serious hazard to the food service industry. They can contaminate food supplies and damage facilities. More importantly, they also contribute to food borne illness and disease. Pesticides are important in controlling these pests but pesticides alone are not the answer. An IPM program in food service is a system designed to prevent pests from infesting your restaurant (food establishment). You may not be able to eliminate the pest management professional (PMP) altogether, but you can reduce this service substantially. Lets look at the core of the IPM program:

Prevention

Deny food, water, and shelter by following good cleanliness, food storage, organization, and sanitation practices. Remember, "cleaning" constitutes freeing the premises of soil and debris, while sanitation refers to cleanliness on a much broader level. Store food and related products above the ground in sealed pest proof containers, and keep pests out of the food service operation by pest proofing (exclusion). It is also very important to work with, rather than depend on a PMP.

Suppliers may bring many pests such as the German roach into a structure, so be sure to use reliable suppliers. Also, store food supplies on pallets, above the ground, and allow up to 18-inch air gap from walls, because mice have poor vision, and frequently use the same pats or runways close to the walls. Keep in mind that mice eat very little, but will

contaminate large amounts of food by nibbling into stored products. They also defecate wherever they travel and feed.

On a regular basis, thoroughly clean and sanitize restaurant equipment, floors, and all crack and crevice areas (cracks and crevices make good harborage areas for roaches). Controlling humidity is important too, as areas with 50% or less humidity will reduce the hatching of cockroach eggs. Compressor motors, including areas like refrigerators and freezers are prime harborage areas for roaches, since they create the ideal temperatures for breeding. Keep these areas clean and free of debris, and do not store food products longer than their recommended time.

Exclusion

Mice need only a crack or hole the size of a dime to enter a building, rats a quarter, and ants and roaches, can enter through water and electrical lines. Flies are attracted to food waste and swarm near lights. As such, all pipes and electrical lines should be sealed with wire mesh (steel wool) and/or caulking, and garbage should be stored in sealed plastic bags in covered containers.

Cover windows and vents with at least a 16-



The droppings on the left are from mice, the ones to the right are from rats or squirrels.

mesh wire, and repair cracks and gaps at all exterior doors and walls. Also, install air curtains or fly fans that blow a steady stream of air to the outside.

Repair cracks or damage to floors, and cover floors with a waterproof material such as tile. Install lighting away from exterior doors since lights will attract all types of flying insects, and caulk and seal around light switches and vent hoods. Keeping exteriors of building perimeter clean and free of excess storage and debris is also important.

Control

The food service professional should have a basic understanding of the identification, behavior habits and biology of the target pests. This is the most important procedure in your control and elimination strategy.

Mice

As previously mentioned, mice defecate wherever they travel, but mostly where they feed. Their territories rarely exceed a 20-foot diameter, so traps and bait stations must be placed in this area in order to be effective.

Rats

The key to a rat control program is pest identification, sanitation, harborage elimination, and rat proofing. Rats will travel up to 150 ft. for food and water and usually use established runways. As such, placement of traps and baits should be in these runways. However, rats are often "bait shy" and more cautious than mice. Subsequently, trapping and baiting are less effective than "rat proofing".

Ants

Ants often nest in wall voids or "moist" situations (water pipes vegetation) near food sources. Nest

size can vary from several hundred to several thousand, and control begins with finding these nesting areas. Baiting, and the use of boric acid along trails to and from the nest is the most effective treatment. Caulking and sealing around pipes and electrical lines are also important control measures.

Cockroaches

Prevention is the best control for cockroaches. This includes food organization and storage, appropriate sanitation, and frequent cleaning. Elimination includes caulking and sealing of possible harborage areas, frequent inspection and monitoring, and the use of baiting and crack and crevice treatments by a PMP.

Stored Product Pests

These pests can include moths and beetles that feed on and contaminate stored grains. Again, the best control is prevention. These measures include inspecting all incoming items for infestation, throwing away and cleaning up all spilled or contaminated commodity promptly, and proper ground maintenance (which is important to reduce sources of pests and attractiveness to pests). Stock rotation in accordance with first-in, first-out principles apply, as old stock is most likely to become infested. Adequate ventilation is important to reduce moisture levels. While prevention is the best control measure, existing infestations are best treated by a PMP.

Integrated Pest Management is primarily low impact pest management with permanent or long term reduction of the target pest population. IPM requires an integration of several approaches to managing pest problems. Again, you may not be able to eliminate your PMP services altogether, but you as a food service professional will be in a more "proactive" roll in your IPM program.

To submit a work order for Pest Management Services, call 442-3251



The German cockroach is one of the most common roaches found in apartment houses, restaurants, and hotels. German cockroaches (eggs included), are "brought in", usually on man's belongings, luggage, boxes or packages. All it takes, is bringing in one egg capsule. Six months later there will likely be an infestation.

References:

- GSA Structural Pest Control Business Practices; School IPM
- NPCA Field Guide to Structural Pests, Eric Smith and Richard M.C. Whitman
- Serving Food Safe, Education Foundation of National Restaurant Association.
- Perdue University, Advanced IPM program
- Designer Poisons, Marion Moses M.D.

For more information, please check out these websites:

www.pestproducts.net www.pestweb.com
www.pctonline.com www.usda.org
www.safefood.org www.birc.org
www.northwesttermite.org

Food Safety

Safety Point	Why?
Follow all manufacturer's instructions on how to use and store cleaning chemicals.	To prevent these chemicals from getting into food.
Keep food covered.	This helps to stop contaminants from falling into the food.
Implement Integrated Pest Management principles to control pests.	To prevent contamination of the food from insects, droppings, urine, and saliva and to prevent the spread of bacteria.
Always clear and clean as you go and throw away packaging as soon as it is removed.	Keeping surfaces clear and clean will help prevent chemicals and objects from getting into food and will prevent the spread of bacteria and viruses.
Repair or replace any equipment or utensils that are damaged, have loose parts, or are not functioning properly.	Loose parts may get into food, damaged equipment (refrigerators that do not maintain proper temperatures, ice machines that do not seal properly, etc.) may allow for bacterial growth and contaminate the food you serve to your customers.
Ensure light fixtures are covered.	To prevent broken glass from getting into food.

What to do if things go wrong

- If chemicals or objects, such as glass or insects get into food, throw the food away.
- If you find pests or signs of pests, take action immediately (see IPM article in this newsletter)
- If you find objects in food that has been delivered, reject the delivery, if possible, and contact the Contracting Officer Representative immediately.

How to stop it from happening again

- Review how chemicals are used and stored
- Review your implementation of IPM
- Train staff on Food Safety



Use soap and lather up for about 10-15 seconds. Make sure you get in between the fingers and underneath the nails where uninvited germs like to hang out. And don't forget the wrists!

When to wash your hands

- Before you start work
- After using the rest rooms
- Before and after handling raw food
- After touching your hair, face or body
- After coughing or sneezing
- When switching from one task to another
- After handling any chemicals
- Before and after changing gloves
- After sweeping, mopping, or taking out the trash
- After handling any chemicals
- Before and after changing gloves
- After sweeping, mopping, or taking out the trash
- Before and after break
- After eating, drinking, or smoking
- Any time you come in contact with anything that will contaminate your hands - money, dirty hand towels, etc.



An Ounce of Prevention is Worth a Pound of Cure!

Hvaine

Bad hygiene habits may include:

- Nose picking
- Touching the face, ear, hair, or any part of the body
- Coughing and sneezing into hands
- Wearing jewelry other than a plain wedding band



Food Handler Attire

Clean, proper attire plays a role in prevention of foodborne illnesses. Dirty clothes can harbor micro-organisms and should be cleaned daily or as often as necessary.

Supervisors should make sure food handlers:

- Wear hair restraints.
- Wear clean clothes each day.
- Use gloves appropriately.
- Remove aprons when leaving food handling areas.
- Remove jewelry (except for plain wedding bands) before preparing or serving food.

**Remember:
Your customers trust
you to protect them!**

According to the FDA Model Food Code and TB MED 530, supervisors must exclude food handlers diagnosed with a foodborne illness from the workplace. In addition, supervisors must notify Preventive Medicine on 442-3175 if a worker has a foodborne illness. Food handlers must not work with food if they suffer from symptoms of fever, diarrhea, vomiting, sore throat, or jaundice (yellow skins and eyes).